

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, applicant requests that this be considered a petition therefore. Please charge the required Petition fee to Deposit Account No. 03-1240.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess to our Deposit Account No. 03-1240.

REMARKS

Favorable reconsideration of this application as presented herein is respectfully requested. Claims 1 and 3 - 9 remain in this application. Claim 2 was previously cancelled. A new Claim 10 is added in this Amendment.

In the Office Action dated November 4, 2004, all pending claims 1, and 3-9 of the current application were rejected under 35 U.S.C. 103(a) as being rendered obvious by Nomura et al. (U.S. Patent No. 5,948,991) in view of Shah (5,948,991). It is respectfully argued that the current invention, as recited in the amended claims, is neither anticipated nor made obvious by Nomura et al., either alone or in combination with Shah. The applicant would like to point out the following distinctive features of the pressure sensor of the present invention.

The pressure sensor according to the amended claim 1 of the present application is characterized by the following features:

- (a) A pressure-sensitive section that is affixed to a base by fluoroc elastomer.

(b) A sensor package, which encloses the pressure-sensitive section, is affixed to a base by the fluoric elastomer.

The fluoric elastomer is furthermore characterized according to claims 5 to 7 of the present application by the following feature:

(c) The pressure-sensitive section and a lead are covered by a fluoric gel, and the fluoric elastomer which affixes the pressure-sensitive section and the sensor package to the base is harder after solidification than the fluoric gel.

The applicant respectfully argues that the above features (a) and (b) are not disclosed or rendered obvious by the combined teachings of Nomura and Shah. It is acknowledged in the Office Action (at page 2) that Nomura does not describe or suggest use of fluoric elastomer as adhesive. Therefore, features (a) to (c) are not disclosed by Nomura.

With regard to features (a) and (b), Shah only discloses that the pressure-sensitive section is affixed to the base by a bonding layer (27), which comprises an adhesive such as a thermoplastic (lines 33 to 35 of column 2). It is presumed that the Examiner considers that this thermoplastic corresponds to the fluoric elastomer of the present application. However, there is no description disclosing a fluoric elastomer as the thermoplastic in Shah. Moreover, the reason why the thermoplastic is asserted to correspond to the fluoric elastomer of the present application is not explained in the Office Action. It is respectfully pointed out with regard to the adhesive (adhesive layer 44) that affixes the sensor package to the base, Shah only discloses and describes that the adhesive preferably comprises epoxy (lines 10 to 11 of column 3). Therefore, Shah not only fails to disclose or teach use of a fluoric elastomer as the adhesive that affixes the pressure-sensitive section and the sensor package to the base in the current invention, but actually teaches use of different adhesive means.

Furthermore, as further clarified in the new claim 10 and disclosed in the specification, because portions of the pressure-sensitive section and of the sensor package affixed to the base are exposed to a gas to be measured, the fluoric elastomer, which has excellent chemical resistance and corrosion resistance, is employed as the adhesive in order to provide high durability to them even when they are exposed to a high-temperature environment and a corrosive atmosphere. In contrast, Shah teaches that these portions (bonding layer 27 and adhesive layer 44) are isolated by a diaphragm (18) from the gas to be measured. Therefore, contact between these portions and the gas to be measured, and the employment of a fluoric elastomer for the affixed portions in order to provide a high durability to these portions, are not described or even contemplated based on the teachings in Shah.

Therefore, features (a) and (b) of the present application are not disclosed in Shah and Nomura, either alone or in combination.

The applicant also would like to point out with regard to feature (c), as described above, that use of a fluoric elastomer as an adhesive that affixes the pressure-sensitive section and the sensor package to the base is neither disclosed nor rendered obvious by Shah and Nomura. In fact, Shah describes in lines 4 to 8 of column 3 that "an organic or inorganic die passivation material which includes silicone gel for example" is employed as a protective layer (41), which covers the pressure-sensitive section and the lead. Therefore, the feature of the present application that the pressure-sensitive section and the lead are covered by the fluoric gel is not disclosed or rendered obvious based on teachings in Shah. Furthermore, in

Shah, the hardness of the protective layer is not considered. Thus, since there is no description concerning the hardness of the protective layer, it can be assumed based on teachings in Shah that the protective layer (41) may be harder than the bonding layer (27) and the adhesive layer (44). In particular, an inorganic die passivation material that is harder than the resin may be employed as the protective layer (41). Therefore, feature (c) of the present application is not disclosed in Shah. Thus, the above features (a) to (c) of the present application are not disclosed or rendered obvious by the combined teachings of Nomura and Shah.

With regard to the rejection of dependent claims 3, 4, 8, and 9, since independent claim 1 on which claims 3, 4, 8, and 9 depend is patentable over Nomura and Shah, these claims should be allowed.

As explained above, the cited references fail to teach certain important features of the claimed pressure sensor, as recited in the amended claims, and said features have a direct bearing on the advantages of the present invention. In view of the foregoing, the applicant submits that the present invention, as recited in the amended claims, is neither anticipated nor rendered obvious by the cited prior art references. Entry of this amendment and an early favorable action on the merits are respectfully requested. Should any questions arise concerning this Amendment & Response, the Examiner is invited to telephone the undersigned attorney for the applicant.

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail under 37 C.F.R. 1.8 in an envelope addressed to:
Commissioner for Patents, United States Patent and Trademark Office,
Alexandria, VA 22313-1450.
DATE: February 4, 2005
NAME: Daniel Basov
SIGNATURE: D. Basov

Respectfully submitted,

By D. Basov

Daniel Basov, Esq.
Reg. # 42,303

Chadbourn & Parke LLP
30 Rockefeller Plaza
New York, New York 10112
(212) 408-5275

Attorneys for Applicant

February 4, 2005